

June 3, 2004
Case No.: AUS920010131US1 (9000/30)
Serial No.: 09/886,192
Filed: June 21, 2001
Page 2 of 11

CLAIM AMENDMENTS:

Please amend the claims as follows:

1. (Currently Amended): A method of operating a plurality of disks comprising:
selecting units of data storage;
allocating the disks between [[an active]] a powered on group and [[an inactive]]
a powered off group;
allocating units of data storage having a usage factor that meets a condition limit
to the [[active]] powered on group;
allocating units of data storage having a usage factor not meeting the condition
limit to the [[inactive]] powered off group; and
selectively reallocating disk between the [[active]] powered off group and the
[[inactive]] powered off group based upon a disk use parameter.
2. (Currently Amended): The method of claim 1 further comprising classifying the
disks into a plurality of disk groups, including said [[active]] powered on group and said
[[inactive]] powered off group.
3. (Currently Amended): The method of claim 2 wherein the classifying the disks
into a plurality of disk groups comprises assigning each disk to the [[active]] powered on
group based on required performance, power consumption, and desire to reduce and
balance the wear within the disk groups.
4. (Original): The method of claim 1 wherein determining the usage factor
comprises determining a unit access parameter.
5. (Original): The method of claim 4 wherein the access parameter comprises file
popularity.

June 3, 2004
Case No.: AUS920010131US1 (9000/30)
Serial No.: 09/886,192
Filed: June 21, 2001
Page 3 of 11

6. (Original): The method of claim 1 wherein the usage factor classifies each unit based on whether the unit meets a conditional limit.
7. (Original): The method of claim 6 wherein a total storage requirement is computed for each unit that meets the condition limit.
8. (Currently Amended): The method of claim 7 wherein the ~~[[active]]~~ powered on group is determined based on the condition limit and the total storage requirement.
9. (Original): The method of claim 1 wherein the condition limit is determined based on the usage factors.
10. (Currently Amended): The method of claim 1 wherein each unit meeting the condition limit is allocated evenly among the ~~[[active]]~~ powered on group.
11. (Currently Amended): The method of claim 1 wherein each unit not meeting the condition limit are allocated evenly among the ~~[[inactive]]~~ powered off group.
12. (Original): The method of claim 1 wherein allocating each unit comprises assigning and storing the unit.
13. (Currently Amended): The method of claim 12 further comprising transferring units between the ~~[[active]]~~ powered on and ~~[[inactive]]~~ powered off disk groups whenever disks are reallocated between the two groups.
14. (Currently Amended): The method of claim 12 further comprising periodically reassigning of disks into one of the ~~[[active]]~~ powered on group or ~~[[inactive]]~~ powered off group.

June 3, 2004

Case No.: AUS92001013|US1 (9000/30)

Serial No.: 09/886,192

Filed: June 21, 2001

Page 4 of 11

15. (Original): The method of claim 14 wherein the periodic reassignment is based on required performance, power consumption, and desire to reduce and balance the wear within the disk groups.

16. (Previously presented): The method of claim 1 further comprising controlling a duty cycle by controlling starting and stopping of the disks.

17. (Currently Amended): A computer usable medium including a program for operating a plurality of disks comprising:

computer readable program code for selecting units of data storage;

computer readable program code for allocating the disks between [[an active]] a powered on group and [[an inactive]] a powered off group;

computer readable program code for allocating units of data storage having a usage factor that meets a condition limit to the [[active]] powered on group;

computer readable program code for allocating units of data storage having a usage factor not meeting the condition limit to the [[inactive]] powered off group; and

computer readable program code for selectively reallocating disk between the [[active]] powered on group and the [[inactive]] powered off group based upon a disk use parameter.

18. (Currently Amended): The computer usable medium of claim 17 further comprising classifying the disks into a plurality of disk groups, including said [[active]] powered on group and said [[inactive]] powered off group.

June 3, 2004
Case No.: AUS92001013|US1 (9000/30)
Serial No.: 09/886,192
Filed: June 21, 2001
Page 5 of 11

19. (Currently Amended): The computer usable medium of claim 18 wherein the classifying the disks into a plurality of disk groups comprises assigning each disk to the ~~[[active]]~~ powered on group based on required performance, power consumption, and desire to reduce and balance the wear within the disk groups.

20. (Original): The computer usable medium of claim 17 wherein determining the usage factor comprises determining a unit access parameter.

21. (Original): The computer usable medium of claim 20 wherein the access parameter comprises file popularity.

22. (Original): The computer usable medium of claim 17 wherein the usage factor classifies each unit based on whether the unit meets a conditional limit.

23. (Original): The computer usable medium of claim 22 wherein a total storage requirement is computed for each unit that meets the condition limit.

24. (Currently Amended): The computer usable medium of claim 23 wherein the ~~[[active]]~~ powered on group is determined based on the condition limit and the total storage requirement.

25. (Original): The computer usable medium of claim 17 wherein the condition limit is determined based on the usage factors.

26. (Currently Amended): The computer usable medium of claim 17 wherein each unit meeting the condition limit is allocated evenly among the ~~[[active]]~~ powered on group.

June 3, 2004
Case No.: AUS92001013|US1 (9000/30)
Serial No.: 09/886,192
Filed: June 21, 2001
Page 6 of 11

27. (Currently Amended): The computer usable medium of claim 17 wherein each unit not meeting the condition limit are allocated evenly among the ~~[[inactive]]~~ powered off group.

28. (Original): The computer usable medium of claim 17 wherein allocating each unit comprises assigning and storing the unit.

29. (Currently Amended): The computer usable medium of claim 28 further comprising transferring units between the ~~[[active]]~~ powered on and ~~[[inactive]]~~ powered off disk groups whenever disks are reallocated between the two groups.

30. (Currently Amended): The computer usable medium of claim 28 further comprising periodically reassigning of disks into one of the ~~[[active]]~~ powered on group or ~~[[inactive]]~~ powered off group.

31. (Original): The computer usable medium of claim 30 wherein the periodic reassignment is based on required performance, power consumption, and desire to reduce and balance the wear within the disk groups.

32. (Previously presented): The computer usable medium of claim 17 further comprising controlling a duty cycle by controlling starting and stopping of the disks.

June 3, 2004
Case No.: AUS920010131US1 (9000/30)
Serial No.: 09/886,192
Filed: June 21, 2001
Page 7 of 11

33. (Currently Amended): A system for operating disks having files comprising:
- means for selecting units of data storage;
 - means for allocating the disks between [[an active]] a powered on group and [[an inactive]] a powered off group;
 - means for allocating units of data storage having a usage factor that meets a condition limit to the [[active]] powered on group;
 - means for allocating units of data storage having a usage factor not meeting the condition limit to the [[inactive]] powered off group; and
 - means for selectively reallocating disk between the [[active]] powered on group and the [[inactive]] powered off group based upon a disk use parameter.